

### ABSTRACT OF THE DISCLOSURE

Disclosed is a positive active material for a lithium secondary battery having high capacity and long durability properties and particularly to a powder of  $\text{Li}_a\text{Ni}_{1-x-y}\text{Co}_x\text{M}_y\text{O}_2$ ,  $\text{Li}_a\text{Ni}_{1-x-y}\text{Co}_x\text{M}_y\text{O}_{2-z}\text{F}_z$  or  $\text{Li}_a\text{Ni}_{1-x-y}\text{Co}_x\text{M}_y\text{O}_{2-z}\text{S}_z$  (where M is a metal selected from the group consisting of Al, Mg, Sr, La, Ce, V, and Ti and wherein  $0 \leq x < 0.99$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.1$ , and  $1.00 \leq a \leq 1.1$ ) is surface-treated by a metal alkoxide solution whereby the durability, capacity and structural safety of said positive active material is increased.

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